

REMARKS

The applicant respectfully requests reconsideration in view of the amendment and the following remarks. Support for amended claim 6 can be found in claims 7 and 8 and in the specification at page 2, line 45 through page 3, line 6.

Claim 6 has been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claims 7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel et al. (US 6,191,188 B1) ("Hossel '188"). Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tropsch et al. (US 5,869,032) ("Tropsch"). Claims 6-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel et al. (US 2001/0021375 A1) ("Hossel '375"). Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel '375 in view of either Tropsch or Hossel '188. The applicant respectfully traverses these rejections.

35 U.S.C. 112, First Paragraph Rejection

Claim 6 has been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. In order to expedite prosecution the applicant has amended claim 6 and deleted reference to polymer blend.

The applicant also points out that component E is not a monomer as asserted by the Examiner. The applicant believes that claim 6 is in compliance with 35 U.S.C. 112, first paragraph. For the above reasons, this rejection should be withdrawn.

35 U.S.C. 112, Second Paragraph Rejection

Claims 7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant respectfully disagrees to the Examiner's opinion that a polymer can only consist of one type of monomers. The Examiner describes what is generally accepted as a homopolymer. The more general term polymer only expresses that there is a macromolecule with repeating units that can be the same (homopolymers) or different (copolymers). The applicant has enclosed excerpts from a polymer textbook ("Hiemenz") as well as from a polymer dictionary ('Alger'). Thus, the more general term, i.e. polymer, should be considered by one of ordinary skill in the art.

This is even more desirable when taking into account that a reaction of monomers A to D with polymer E might take place or not. In the first case, a graft copolymer of monomers A to D on polymer E can be yielded. In the second case, a blend of polymer E and a copolymer consisting of monomers A to D can be yielded. The applicant believes that the term "polymer" (original claim 1; page 2, line 31) is definite. For the above reasons, this rejection should be withdrawn.

Rejection over Hossel '188

Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel '188. The PCT counterpart of Hossel '188 (WO 9831328) is disclosed in the applicant's specification at page 2 starting at line 20. Hossel '188 describes an aqueous composition comprising a copolymer a) based on N-vinylcaprolactam (VCap), N-vinylpyrrolidone (VP) and N-vinylimidazole (VI) and at least one polyoxyethylene C₆-C₁₅ monoalkyl ether b).

In the present application cosmetic preparations are disclosed which comprise polymers

which comprise certain amounts of monomers A to D and polymer E, wherein components D and E are optional. The different polymers are comparable insofar that polymer a) in is based on monomers A to D of the present application and polymer b) in Hossel '188 is selected from polymer E of the present application.

The present application differs from Hossel '188 with regard to a number of features: First, in the case that the polymer inventively used according to the present application is based on monomers A to C only, it does not require polymer b) of Hossel '188 which is essential for their invention renders Hossel '188. It is acknowledged that the applicant's optional polymer E can include the required component b of Hossel '188 (polyoxyethylene C₆-C₁₅ -monoalkyl ether).

In the present application, polymers are used that comprise certain amounts of A to C (and optional components D) and E) which renders them different from the mere mixtures of the two polymers a) and b) described in Hossel '188. Therefore, the applicant's claimed cosmetical composition is different from the composition of Hossel '188.

In addition, the applicant respectfully disagrees with the Examiner that the inventively used polymer with at least three monomers and exhibiting a monomer composition different from the polymer disclosed in Hossel '188 might be available by simple routine optimization.

One of the problems to be solved by the present application was to provide polymers that give clear hair fixing gels. The polymers of Hossel '188 did not recognize this problem and are not able to solve the problem (see Example 1 a) at page 36 of the specification [(60 % VP (vinyl pyrrolidone), 10 % VI (vinylimidazole) and 30% VCap (vinylcaprolactam)]. The results were considered 4-5 (4 is cloudy and 5 is milky) see page 34 of the specification. Example 1b), at page 36 of the specification, is outside the scope of the applicant's claimed invention achieved

results of 4-5 (cloudy or milky) with VP/VI/VCap (37/3/60). Furthermore, Hossel '188 does not teach how the polymers might be adjusted to solve the problem.

Suitable polymers a) in Hossel '188 comprise (a) from 20 to 80% by weight, preferably from 40 to 60% by weight, of N-vinylcaprolactam, (VCap) (b₁) from 10 to 60% by weight, preferably from 20 to 50% by weight, of N-vinylpyrrolidone(VP), (c₁) from 5 to 50% by weight, preferably from 7 to 20% by weight, of N-vinylimidazole (VI) or quaternized N-vinylimidazole, and optionally (d₁), and where the monomer (c₁) employed is a nonquaternized N-vinylimidazole, advantageously by subsequent quaternization of the polymer (see Hossel '188 at col. 2, line 3 to 19). Component C₁(VI) is outside the scope of the applicant's claimed invention (the applicant claims at most 4% compared to at least 5% by Hossel '188). For this reason alone the rejection should be withdrawn.

The next difference is the claimed ratio of monomer C to monomer B. The applicant uses a very low amount of monomer C (VI). Transferred to Hossel '188 it would mean that the amount of monomer C (VI) must be as low as (60% VP/14 (applicant's claimed ratio)) = 4.29% by weight or less (1:14 with regard to 60% by weight VP; the ratio 1:14 is presented in claim 12 of the present application) or as low as 2.61 % by weight or less (1:23 with regard to 60 % by weight VP; the ratio 1:23 is presented in claim 13 of the present application). Again Hossel '188 requires a minimum of 5% by weight of monomer C.

This is related to a distance of 14 % [(5-4.29) /5] and 48 % [(5—2.61)/5], respectively, away from the lower limit of 5 weight % of the amount of VI in Hossel '188. Thus, it cannot be stated that routine optimization would have led the artisan to the present invention.

Furthermore, monomer C of the present invention is exclusively employed in non-

quaternized form whereas Hossel '188 prefer to use VI in quaternized form might it as quaternized monomer or by quaternization subsequent to polymerization (col.2, lines 3 to 19).

The Examiner must consider the reference as a whole, In re Yates, 211 USPQ 1149 (CCPA 1981). The Examiner cannot selectively pick and choose from the disclosed multitude of parameters without any direction as to the particular one selection of the reference without proper motivation. The mere fact that the prior art may be modified to reflect features of the claimed invention does not make modification, and hence claimed invention, obvious unless the prior art suggested the desirability of such modification (In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984); In re Baird, 29 USPQ 2d 1550 (CAFC 1994) and In re Fritch, 23 USPQ 2nd. 1780 (Fed. Cir. 1992)). In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (in a determination under 35 U.S.C. § 103 it is impermissible to simply engage in a hindsight reconstruction of the claimed invention; the references themselves must provide some teaching whereby the applicant's combination would have been obvious); In re Dow Chemical Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988) (under 35 U.S.C. § 103, both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure). The applicants disagree with the Examiner why one skilled in the art with the knowledge of the references would selectively modify the references in order to arrive at the applicants' claimed invention. The Examiner's argument is clearly based on hindsight reconstruction.

So, the teachings of Hossel '188 would not have allowed the one skilled in the art to choose the very low amounts of VI. In fact, Hossel '188 teaches away from the inventive low amounts of the present application. For the above reasons this rejection should be withdrawn.

Rejection Over Tropsch

Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tropsch. Tropsch discloses “quaternized copolymers suitable as active ingredients in cosmetic formulations, such as hair styling compositions” (title). The polymers comprise certain amounts of (Q)VI, VCap and VP (claim 1) and cosmetic hair formulations containing those polymers (claim 5).

In particular, the polymers comprise (a) from 5 to 50% by weight, preferably from 7 to 20% by weight of N-vinylimidazole or quaternized N-vinylimidazole, (b) from 20 to 80% by weight, preferably from 40 to 60% by weight, of N-vinylcaprolactam, (c) from 10 to 60% by weight, preferably from 20 to 50% by weight, of N-vinylpyrrolidone, and (d1) (...) and if an unquaternized 1-vinylimidazole is used as monomer (a) subsequent quaternization of the polymer (col. 1, line 57 to col. 2, line 4). This is the same percentage range disclosed as for Hossel '188. The N-vinylimidazole taught by Tropsch is outside the applicant's claimed invention.

The polymers of Tropsch are employed exclusively in a quaternized form. A quaternized polymer is different from the inventively employed polymer comprising unquaternized VI monomer units. Thus, Tropsch cannot render the present invention it obvious.

In contrast, the teachings of Tropsch would not have allowed the one skilled in the art to choose a nonquaternized polymer especially in the amount claimed by the applicant. For the above reasons, this rejection should be withdrawn.

Rejection Over Hossel '375

Claims 6-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel '375. Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel '375 in view of either Tropsch or Hossel '188.

Hossel '375 disclose mixtures comprising A) at least one copolymer obtainable by (i) free-radically initiated solution polymerization of a monomer mixture [of further defined monomers (a) to (e) with (a) and (b) being required], and (ii) subsequent partial or complete quaternization or protonation of the polymer where the monomer (a) is not quaternized or only partially quaternized and B) at least one inorganic UV filter (see the abstract and paragraph nos. [0009], [0010], [0011], [0017], [0018]).

The polymers of Hossel '375 are employed exclusively in a quaternized form. It is obvious that a quaternized polymer is different from the inventively employed polymer comprising unquaternized VI monomer units. Thus, Hossel '375 cannot render the present invention it obvious.

In contrast, the teachings of Hossel '375 would not have allowed the one skilled in the art to choose a nonquaternized polymer. For the above reasons, these rejections should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

A one month extension fee has been paid.

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Reply to Office Action of December 8, 2006

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Applicant believes no additional fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 12810-00039-US from which the undersigned is authorized to draw.

Dated: April 5, 2007

Respectfully submitted,

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Enclosures: polymer textbook ("Hiemenz")
Polymer dictionary ('Alger')